IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA, ex rel, W. A. DREW EDMONDSON, in his capacity as ATTORNEY GENERAL OF THE STATE OF OKLAHOMA, and OKLAHOMA SECRETARY OF THE ENVIRONMENT C. MILES TOLBERT, in his capacity as the TRUSTEE FOR NATURAL RESOURCES FOR THE STATE OF OKLAHOMA,	)	
Plaintiff,	)	CASE NO. 05-CV-329-GKF- SAJ
V.	)	
TYSON FOODS, TYSON POULTRY, INC., TYSON CHICKEN, INC., COBB-VANTRESS, INC., AVIAGEN, INC., CAL-MAINE FOODS, INC., CAL-MAINE FARMS, INC., CARGILL, INC., CARGILL TURKEY PRODUCTS, LLC, GEORGE'S, INC., GEORGE'S FARMS, INC., PETERSON FARMS, INC., SIMMONS FOODS, INC. AND WILLOWBROOK FOODS, INC.	)	
Defendants.	)	

AFFIDAVIT OF DR. C. ROBERT TAYLOR

The undersigned, C. Robert Taylor, does solemnly swear and state:

1. I am the Alfa Eminent Scholar and Professor of Agricultural Economics at Auburn University, Auburn, AL. This position is equivalent to the rank of Distinguished University Professor. I hold a B.S. degree in agricultural economics from Oklahoma State University, a M.S. degree in economics and agricultural economics from Kansas State University, and a Ph.D. degree in agricultural economics from the University of Missouri-Columbia. I have held tenured positions at the University of Illinois,

EXHIBIT 5

Montana State University and Texas A&M University in addition to Auburn University. I served on the Executive Board and Foundation Board of the American Agricultural Economics Association, which is the national association for agricultural economists, from 1998-2001. I have served on the editorial board of four scholarly journals, including the American Journal of Agricultural Economics, which is the premier journal in my profession. I am co-author of one graduate textbook book, editor of one book, co-editor of three books, and I have authored about one hundred peer reviewed scholarly articles, plus an additional hundred reports, book chapters and other publications.

2. I have conducted economic analyses for the United States Department of Agriculture, the United States Environmental Protection Agency, the United States Department of Energy, the National Science Foundation, the Natural Resources Economics Service, the United States Army Corps of Engineers, the United States Forest Service, the American Farm Bureau Research Foundation, Ciba-Geigy company, the United States Congressional Office of Technology Assessment, the National Crop Insurance Service, various state agencies, and state agricultural organizations. I have also given "briefings" on price, income and consumer effects of pesticide policy to the United States Senate and House Agriculture Committees, to the United States Environmental Protection Agency, to a national agricultural industry group, and to the Chief Economist of the United States Department of Agriculture.

3. I have testified to the United States Senate Committee on Agriculture, Nutrition and Forestry in a session on Economic Concentration in Agribusiness in 1999, and I provided testimony for the United States House Agricultural Committee Hearings on Livestock Prices. I also testified to the United States Senate Committee on Agriculture, Nutrition and Forestry in 2002, in a session on banning packer ownership of cattle and hogs, and on USDA/GIPSA's enforcement of the Packers and Stockyards Act. In April of this year, I testified to the United States House of Representatives Committee on Agriculture, Subcommittee on Livestock, Dairy and Poultry on key issues affecting the livestock and poultry industries.

4. In 2002, I gave an invited talk to the Oklahoma Senate titled "The Global Food System: Legal Issues from an Economist's Perspective." I also gave a talk in 2002 on "Contract Agriculture: Legal Issues from an Economist's Perspective," at a CLE conference sponsored by the Oklahoma Attorney General's Office and the Oklahoma Bar Association.

5. Early in my professional career I conducted substantive research on plant nutrients as water pollutants. More recently, I have done extensive work regarding the economics of the livestock and poultry industries, including analyses of market power imbalances.

6. I have been retained by the Oklahoma Attorney General to evaluate the relationship between poultry growers and defendant poultry companies, and to assess the

economics of the poultry industry, including the costs of safely removing poultry waste (including used litter and dead birds) from the Illinois River Watershed (IRW).

7. The domestic poultry meat industry is fully integrated vertically, meaning that ownership and control of essentially all aspects of production in the vertical chain from baby chick to processed broilers and wholesale poultry products is held by poultry companies, commonly known as "integrators." The poultry industry, which includes broiler, turkey and egg production, is the most vertically integrated of all major agricultural industries. Each of the defendant companies is vertically integrated, and each has business practices similar to those discussed below.

8. Integrators generally own or control the breeding flock, hatcheries, chicks, assignment of baby chicks to growers, feedmills, feed ingredients, transportation of feed, and the processing (slaughter) plants. Integrators make all decisions regarding placement of baby chicks, the number of chicks placed with each grower, and when birds reading for processing will be picked up from the grower. Integrators also dictate specifications for growout house and equipment. Location of growout facilities and thus location of poultry waste generation is also fully controlled by the integrators.

9. Under the dominant business arrangement, the integrator owns the chicks and feed, while farmers, commonly called contract growers, typically carry out actual production, or growout, from chicks to birds ready for processing. Growout of each

flock is under the direct supervision and control of the integrator. Integrator representatives typically visit each growout house at least weekly to check on and supervise the grower's care of flocks and cleanout of used litter, waste and dead birds. Integrator representatives also make recommendations or mandates to growers regarding maintenance and upgrades of facilities. Many of these obligations are found in standardized contracts integrators provide to growers.

10. Growers are required to provide expensive specialized production facilities (houses, associated equipment, utilities), grower services (labor and management), and waste disposal.

11. Beginning in the 1950s contracting of broiler production evolved from simple credit arrangements with feed companies, to profit-sharing arrangements, to flat fee contracts, and finally to a basic feed-conversion contract. Most poultry contracts now establish a base fee the grower will receive, with a plus or minus adjustment based on relative performance compared to other growers for the same integrator in the same complex. Economists often refer to this arrangement as a pay "tournament."

12. Open, transparent cash markets for broilers or turkeys ready for processing disappeared decades ago. Because there is no open market for poultry ready for processing, there is no economically viable alternative for commercial, non-specialty growers who wish to be independent from integrators. Integrators will not purchase

birds from truly independent growers. Therefore, a person cannot independently raise commercial poultry and have a ready cash market for them.

13. In the early history of the vertically integrated poultry industry, the integrators and growers were partners and tended to look out for each other's economic welfare. However, the industry has evolved to the point that growers are completely at the mercy of their integrator. In economics, this is referred to as monopsony, or "buyer" or "contractor" power held by the integrator over their growers.

14. New growers are not permitted to negotiate contract terms; a new grower's only option is to accept or reject the contract. Similarly, existing growers are not allowed to negotiate timing of a contract or any contract terms. Arms-length contract negotiations rarely if ever occur between grower and integrator; rather, contracts of adhesion characterize the industry.

15. Broiler production is both capital and labor intensive. Growers bring roughly one-half of the capital and much of the labor required to produce a processed whole bird.

16. Poultry grow-out operations have a very long economic payout period, typically 20-30 years for a wood frame house and longer for a metal frame house. Long-term profitability for growers has been declining. A 1992 Oklahoma State University (OSU) study reports a negative budgeted return (loss) of $953 annually (on a $100,000 investment) to risk, management, land, and overhead after subtracting a

modest charge for family labor. A similar OSU budget published in 2006 reports shows a larger loss of $4,260 annually (on a $255,000 investment).

17. Four to six houses generally constitute a full time job for one person. Such an operation now costs between $500,000 and $1,000,000 to construct, depending on size and equipment. The average size of a grower's operation in the IRW is approximately 3 to 4 houses.

18. Farmers become commercial contract growers by invitation only. Similarly, existing growers who wish to expand production by building additional houses do so only with the integrator's expressed permission.

19. Once waste is removed from the poultry house it no longer has a role in the poultry production process used by the defendants. Poultry industry representatives often assert that poultry waste is a "valuable resource." While it is well established that poultry waste products do contain plant nutrients that may be valuable in crop or pasture production, it is critical to make an economic distinction between the "gross" value and the "net" value of poultry waste—a distinction rarely made by industry representatives. The net value may be small or even negative due to the costs of loading, transporting, and applying waste to fields. Certainly, as nutrients are built up by repeated field application of waste, the net value of waste declines.

20. Once a person becomes a grower, the integrator has almost total economic control and determines profitability or lack thereof of the average grow-out operation. Thus, the integrator effectively makes the decision that determines whether growers have sufficient income to properly manage and dispose of waste products.

21. In my opinion, integrators have used their economic control over growers to shift environmental and health risks from themselves to growers.

22. Integrators make the decisions about the location of grow-out facilities. Integrator control over location of production facilities is so complete that individuals desiring to become growers who are outside an area defined by an integrator—typically 25-50 miles--are simply not offered the option to become a grower. Many integrators even specify a maximum allowable distance between a broiler farm and the feed mill. For example, a Tyson web page, which was recently removed, stated, *"Normally the (grower) farms are required to be within thirty to forty miles of the feedmill in the complex."* Integrators, not growers, therefore directly determine where waste products are generated. Because poultry waste is costly to transport relative to its value in non-poultry agricultural operations, the integrators therefore determine distribution of waste products within a watershed.

23. The fact that multiple integrators chose to locate in the same area, particularly the IRW, further concentrates and exacerbates pollution, health and other environmental problems caused by poultry waste. An integrator's decisions about where to locate a

complex and the size of the area in which growout facilities (and thus waste production) is typically based on their out-of-pocket expenses for hauling feed to growout facilities and birds to processing plants. The business model adopted by poultry integrators ignores external (pollution) costs associated with poultry waste and thus results in waste generation and land application of waste being concentrated in relatively small geographical areas. Watershed pollution problems are therefore controlled not by the relatively small family farms, but by integrators' decisions to concentrate poultry production and thus waste generation in relatively small geographic areas.

24. In my opinion, integrators have been well aware that land application of poultry waste exceeds the assimilative capacity of the land in several areas of the U.S., including the IRW. Real and potential environmental problems associated with excess phosphorus in poultry waste have been widely discussed and researched in universities, various agencies within USDA including the Economic Research Service (ERS) and the Natural Resource Conservation Service (NRCS), and in the U.S. Environmental Protection Agency (USEPA) for two decades. During that time, there have been numerous publications, seminars, symposia, and training sessions by USDA/NRCS, USDA/ERS and other public entities on environmental issues related to concentrated livestock and poultry waste. Before concern over phosphorus came to the forefront, there was widespread concern over excess nitrogen in poultry waste applied to cropland. In general, concern over waste associated with the business model that concentrates livestock and poultry production in small geographical areas

has been at the forefront of economic and scientific dialog and concern at least since the early 1970s.

25. According to a 2003 report published by the University of Arkansas Center for Excellence for Poultry Science, it would cost about one and one-half pennies per bird to transport all poultry waste generated in the IRW an average of 100 miles[1]. If this cost of removing poultry waste from the IRW were transferred to the retail level, consumers of poultry meat in the U.S. would pay an average of only one to two pennies per year per person for all poultry consumed[2].

FURTHER AFFIANT SAYETH NOT.

C. Robert Taylor, Ph.D.

Subscribed and sworn to me by Robert C. Taylor, on the 13th day of November, 2007.

Signature Dorothy Burton Hughley

Printed Name Dorothy Burton Hughley

Notary Public, State of Alabama

My commission expires: June 14, 2009

[1] Tabler and Berry report that poultry production cost would increase by $0.000036 per mile per live pound of bird produced to transport poultry waste out of the IRW. Thus, the cost to transport waste generated by a 4.5 lb bird 100 miles would be $0.0162/bird. G. T. Tabler and I. L. Berry, "Nutrient Analysis of Poultry Litter and Possible Disposal Alternatives," Avian Advice, University of Arkansas, Center for Excellence for Poultry Science, February 2003.

[2] These costs should be proportionately increased for longer hauling distances, or decreased proportionately if all poultry waste is not transported out of the IRW.